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states:(71) Applicant: **JAPAN SCIENCE & TECHNOLOGY  
CORP**(72) Inventor: **BABA MAMORU  
KUMAGAI NAOAKI**

(74) Representative:

**(54) THIN-FILM SOLID  
LITHIUM ION SECONDARY  
BATTERY**

(57) Abstract:

**PROBLEM TO BE SOLVED:** To develop a practical, totally solid laminated thin-film solid secondary battery, with reduced weight with high capacity, and a solar battery combined type thin-film solid secondary battery.

**SOLUTION:** This laminated thin-film solid lithium ion secondary battery is characterized by laminating two or more layers of thin-film solid lithium ion secondary battery cells. A single conductive layer is interposingly laminated as a common electrode film between the upper layer cell and the lower layer cell, or an insulating film is interposingly laminated between the respective electrode films of the upper layer cell and lower layer cell, or the respective substrates of the upper layer cell and lower layer cell are interposingly laminated. Further, the thin-film solid lithium ion secondary battery cell is

laminated and combined on a silicon solar battery formed on a transparent substrate, through an insulating layer, or the silicon solar battery is laminated and combined on the thin-film solid lithium ion secondary battery cell formed on the substrate, through the insulating layer to constitute the solar battery combined thin-film solid lithium ion secondary battery. Or the thin-film solid lithium ion secondary battery cell and the silicon solar battery are formed on one substrate or separately formed on separate substrates to constitute the solar battery combined type thin-film solid lithium ion secondary battery.

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